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NOT BOUND TO SWEAR TO THE DOGMAS OF ANY MASTER.

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ORIGINAL COMMUNICATIONS.

LECTURE DELIVERED IN THE CALIFORNIA MEDICAL COLLEGE (ECLECTIC).

BY D. D. CROWLEY, M. D.

LADIES AND GENTLEMEN: Having in previous lectures described the effects of certain pathological conditions, which were accompanied by perverted nutrition produced by either local or constitutional causes, and terminated in a solution of continuity in the part, we will now proceed to speak of the manner in which such a condition may gain its continuity; by which an injured tissue may regain its usual appearance and functions.

DIFFERENT KINDS OF REPAIR.

As there are several kinds of injuries, also are there different modes of repair, such as: 1. Immediate union without a scab. 2. Immediate union with a scab. 3. By adhesive inflammation or union by the first intention. 4. By granulation. 5. Union by secondary adhesions.

IMMEDIATE UNION.

Though repair in a simple incised wound may take place by any of the five different modes, yet it is quite natural to expect immediate union, as this is the only wound that may unite without the signs of repair, as no coaguable lymph presents itself.

CONDITIONS NECESSARY.

Previous to speaking of the process of healing, let us enumerate certain conditions that must be present, as: 1. A healthy constitution. 2. The perfect coaptation of the entire surface. 3. The exclusion of air and foreign bodies from between the sides of the wound. 4. The absence of all inflammatory action. 5. A certain homogenity of structure.

The absence of any of the conditions just mentioned would be sufficient to prevent repair by immediate union. Healing by immediate union consists in conjoining of two incised surfaces. No new material is formed or exuded into the continuity from the vessels. It would appear unreasonable that the two separated ends of a fibre should grow together, but on second thought we may easily understand this phenomenon. Every muscle and tissue of the body 'is more or less saturated by plastic lymph, though so small in quantity that it is undiscernable, yet so active in its nature that it is of material aid in the connection of severed parts. Many authors in their writings, do not speak of any intermediate substance, however small, but reason teaches us that wherever there is destruction there must be repair, and with repair new material from some source. We might then take the ground that the only difference between the intermediate substance in healing by immediate union and first intention, is only in quantity, being imperceptible in the former, while in the latter it is present in larger quantities. It is also supposed that this form of repair is similar to cohesion; that substances having a homogenity of structure become incorporated in each other, the molecules of one uniting with those of the other. This is a pleasant theory, but philosophy deals only with inert material, and the rule however true in such matter might be altogether erroneous in vital parts.

CHANGES IN THE WOUND.

Let us for a moment consider the intricacies of this mode of union: 1. The wound is incised. 2. There is a transitory flow of blood, followed by a slight contraction of the orifices of blood vessels. 3. After removing the blood from the wound, the two surfaces are brought in direct apposition and covered by some substance that will prevent the air reaching it. It is now supposed that similar tissues meet, the muscular tissue of one side with that of the other, cellulo-adipose with cellulo-adipose, integumental with integumental, and vessels with vessels. The vessels we spoke of as undergoing temporary contraction are brought in direct apposition, the blood which ceased to flow and become partially coagulated, now continues its course, as the blood cells do in inflammation, terminating by resolution. I maintain that there is an intermediate substance, and that this form of repair is an adhesion instead of cohesion. We might view the adhesion of a single fibre or vessel as we would the fractures of a bone, the plastic matter forming a protective callus. This protective callus might not become organized, but in a few days or weeks, be reabsorbed, while in the meantime the definitive callus causes the severed part to become continuous. In many severe operations, where lengthy incisions are made and certain glands or deep structures are removed, it is reported that no inflammatory matter is thrown out during reparation, hence union takes place immediately.

NO CONTRACTION IN THIS PROCESS OF REPAIR.

The face is frequently burned, leaving a cicatrix so extensive as to produce considerable deformity, as drawing the angle of the mouth to one side. A plastic operation such as carrying a flap from the neck to the face is performed. The scar being entirely removed, the simularity of the structures of the face and neck are so great that there is homogenity; hence, often repair by immediate union follows, leaving no unsightly scar, for contraction is never a result. To conclude with this form of repair, we might state that the proportion of instances in which it occurs is but few, and in its stead we have union by first intention.

Union by the first intention is effected by the deposit of lymph between the opposed surfaces, and occurs more frequently than in direct union. In order that it should take place, the following conditions are necessary: 1. That the patient's constitution be in a healthy state. 2. That the wound be closed, its sides brought into accurate apposition, and the air excluded. 3. That the interposition of all foreign bodies be carefully guarded against. 4. That the inflammation be restrained with such bounds as suffice for the production of lymph, but are insufficient for the destruction and degeneration of the latter, or the production of pus.

EXTERNAL APPEARANCE.

After arresting the hemorrhage in an incised wound, removing all foreign substances from between the gaping lips, it is quite natural that your attention should be turned to the closing of the wound which is effected by plasters, sutures, etc. As the wound is now closed, we will study its external appearance. The borders are red and slightly œdematous for some distance away, which increases for the first twenty-four hours. There is also hyperasthesis with increased temperature. These symptoms pass away at the termination of the second or third day; if at the termination of the fourth day they do not disappear, there will be a tendency to the breaking down of the wound, but we will consider the symptoms favorable, and as we are acquainted with the different changes visible to the naked eye, we might for a time consider those which occur in the tissues from the time of wounding until the formation of a cicatrix.

CHANGES IN WOUND.

This process is rarely studied in man, but in animals each step has been closely observed. In the surface of an incised wound are numerous capillaries with opened mouths emitting blood. The cessation of hemorrhage and the contraction of the blood-vessels occur simultaneously. These conditions are followed by stasis of blood as far back as the first anastomosing branches, when collateral circulation takes place. These branches now contain the blood belonging to themselves and the severed vessels. No wonder then that we perceive a swollen and red condition externally. Following in the steps just mentioned, is the exudation of the liquor sanguinis and a few white corpuscles, the lymph coagulates, separating itself from the serum, it forms a kind of a glue, becoming more consistent each day, and holds the denuded surface in close apposition. The lymph many times is not healthy. It contains too great a proportion of white corpuscles and too little fibrine. The preponderance of white corpuscles is an indication of inflammation and suppuration, and the patient is severely anæmic. The preponderance of fibrine in the lymph denotes speedy repair. The fibrine soon turns to connective tissue. Schmidt, in his experiments, concluded that from the fibrine (exuded from vessels), muscular striæ, as well as connective tissue is produced.

THE FORMATION OF VESSELS.

The formation of new vessels or channels in the plastic lymph is an interesting study. Whether they primarily originated in the plastic lymph itself or form the trunks of the surrounding vessels has been a matter of some discussion for a number of years back. We might easily conceive how both elements might be associated with their formation. In the interval between the second and third weeks, the coagulæ in the mouths of the numerous capillaries are being reabsorbed and channels are found in the plastic lymph. These channels are at first colorless; a single red corpuscle makes its appearance and is soon followed by others which gives their receptacle a bright red color; soon after the capillaries form loops, one anastomosing with another, and about the fifth week they pass from one wall to the other through the lymph. This process may be observed in transparent tissues. The origin of vessels might be explained by considering the absorption of the coagulæ in the mouth of the severed vessels, leaving them so weakened that red globules make their appearance through the coats, and push their way between the striæ of the connective tissue, which are formed by elongated cells in the lymph. It is possible, too, that on the appearance of the first globule a certain membrane is pushed from the original vessel which finds a channel in the interstriæ. Erichsen speaks of lateral dilation of the severed vessels, like pouches, which soon assume the shape of blood-vessels. Travers thinks that vessels are formed in the lymph even previous to the circulation. From the result of the study of these men, I will allow you to draw a conclusion.

REPAIRED BY GRANULATION.

If a simple incised wound fails to unite by adhesive inflammation, or by second intention, from the deficiency of healthy fibrine, or the interposition of foreign substances, repair by granulation will take place; or if a crescentic portion of the connective tissue be removed repair must follow in the same manner. Let us suppose that the latter condition is present, how then will the tissues be restored as there are no opposing walls for fibrine to effect their uniting. The severed capillaries contract at their mouths; coagulæ form in them, and hyperæmia is present in the neighboring anastomosing vessels. There is also exudation of liquors sanguinis heavily laden with white corpuscles. Generally there is an excess of inflammation in this wound, and the superficial portion sloughs, the liquor sanguinis and white corpuscles break up and form pus. Shreds of matter are separated from the wound and as the inflammation abates, the lymph covering the wound becomes organized. Granulations or little hillocks of organized flesh stud the entire surface and are constantly bathed in a yellowish white matter rich in pus corpuscles. They continue to form until the space is filled with new elements. Why healthy granulations do not continue to grow after reaching a common level with the skin is a matter for considerable thought, we know they do stop, from a cicatrix, and are covered with epidermis.

At this particular period many cells in the granulating tissue disappear by passing back into the vessels—some undergo fatty degeneration and as atrophy diminishes the granulation, the formation of cells ceases. As we have spoken of cicatrization in a former lecture on ulcers and the origin of vessels in lymph it would only be a repetition to follow them through as they enter a granulation giving it the red color which is so characteristic. All wounds that are contused and lacerated heal by granulation.

All cavities left after the removal of foreign bodies, incised wounds in unhealthy people (having corpuscular lymph) etc., unite by granulation. *Union by second intention* or secondary adhesion is only the uniting of two surfaces which failed to unite by the first intention and become subsequently covered with granulations. You can easily perceive how through the deficiency of fibrine an incised wound may fail to heal by its usual process; if so, inflammation follows; there is formation of pus and granulations; when the granulations are healthy those of one side when brought in contact with others often unite, and here, too, is a peculiar process, the granulations on either side flatten and through the interposition of a small amount of fibrine caused by a slight degree of irritation they become as one; the vessels of one side send out loops to unite with those of the other, and in a few days there is permanent adhesion.

Secondary adhesion not unfrequently happens in amputations and hairlip operations. It saves the tedious form of repair by granulations—waiting until the entire wound is filled by granulations.

HEALING BY SCABBING,

Or incrustation, consists in the direct adhesions of the sides and lower part of a wound by a crust of dried serum or blood which prevents the air from entering. Repair takes place without inflammation; the epidermis forms under the crust and the scab soon falls off, leaving a repaired surface. This is rare in man, except in superficial wounds. Often in treating a superficial abrasion, you will endeavor to imitate a scab by applying lint dipped in collodion over it, thus preventing air and foreign bodies from entering the wound.

CICATRICES IN MUSCLES AND NERVES.

Bilroth states that between the ends of a severed muscle he never saw any new formation of muscular tissue. Weber thinks that new muscular fibres form from the cells of the old ones, and the muscular new formation is quite complete. A nerve when severed unites by new formation of nerve tissue. When tissue is removed, in the nerve, new cells form that have the motory and sensory power. Bilroth states that there is destruction of the axis cylindar and muralema, and at the same time from them is the proliferation of new spindle-shaped cells that develop into a new nerve.

It is now an authenticated fact that muscles, nerves, vessels, and epitheliæ are not formed from new connective tissue originating in fibrine, but from the old cells in their mother tissue.

EVERY PHYSICIAN HIS OWN DISPENSER.

BY C. H. HOUPT, M. D.

As a matter of convenience, the writing of a prescription and letting the friends or family send to the druggist for its compounding, I will not question. Neither will I deny that the same method is the cheapest (for the physician), but I very much question if the above fashion is always the most expedient for the physician, or if the expected relief is realized, not to say enhanced thereby.

In many cases there dwells a great uncertainty regarding the actions of medicine, and thus it is that valuable remedies are frequently discarded for no fault of theirs, but because the quality was inferior, or the quantity was too much or too little, or a substitution was made, it may be by carelessness, it may be inadvertently, by incompetent hands, or perchance purposely, to cheapen the prescription and enlarge the profit, or the important ingredient may not have been at hand or procurable. I do not wish to argue to the disadvantage of the druggist, to imply that he is always dishonest or incompetent. I claim that profession one of importance, excelled only by that of the physician; far be it for me in any manner to intimate that I love my brother of the mortar and pestle less. No, my ambition is to prove that I love him of the scalpel better.

It is the noble office of the physician to relieve, to heal and cure suffering humanity, and this motive takes precedence of all else; no means should be left untried that will tend to perfect or lead to a shorter road to reach these ends.

What are the advantages that are derived from a physician's furnishing his own medicine? He is sure that the patient gets the quantity and quality of medicine he prescribes. Being positive as to the remedy administered, he can always rely with greater certainty on the result expected.

How many physicians lack confidence in their remedies. Does the fault lie in the remedies themselves? Certainly not always. If the remedies are given in proper indications of good quality and strength, the expected results will be the rule, not the exception, as is too often the case. Is there not too much medicine given? Are not patients frequently disgusted by the numerous changes in prescriptions? Would not the dispensing of his own medicine by the physician lead to a contraction of the pharmacopia? Would not the physician's knowledge of the action of medicine be improved? I think I may anticipate an affirmative answer to all these questions. To administer less medicine to get more certain results are consummations devoutly to be wished for, and if these ends can be brought about by the physician carrying and dispensing his own medicine, how long should he hesitate in following such a course. A proper selection of a few medicines in their most condensed and reliable form, carried in a pocket case, will enable the physician to prescribe for an astonishing number of maladies. The combinations and results that can be brought about by a pocket case, containing say twenty-four remedies, is almost endless, and would excite the wonder of any one who has not given the matter thought. That better satisfaction of the patient will be induced by the following of this plan is not for a moment questioned.

ADDRESS DELIVERED BEFORE THE STATE MEDICAL SOCIETY (Eclectic).

BY P. SAGE, M. D.

IN all ages of the world it has been the lot of man to die. No political eminence from the gift of the people will exempt him from that dreaded event. It is the common lot of all to leave all their fascinating interests here and run the inevitable risk of a better state, and perhaps of a mental annihilation. These uncertainties induce him to cling to the wavering conditions of this life with unyielding tenacity. His unwillingness to exchange a poor certainty for an uncertainty, has instituted many theories by which to prolong this unsatisfactory existence, and when found unavoidable at last, he hopes through mental capability to enjoy another and better state.

If we can credit the acknowledged history of man, he lived many hundreds of years more in the early ages than in the present one, and discussion has given no satisfactory reason for this wide difference in the duration of human life. It seems to be a fact that the desire to live longer is more ardent in this age than it was in the early ages, and did not our statistics advise us to the contrary, it would be quite reasonable for us to believe that the superior intelligence of the people at the present day would increase the average years of human life in proportion to the advancement of the intellect beyond that of the early inhabitants of earth, but having no example in proof of this, we must accept the conclusion that the greater the intelligence of the people the sooner they fulfill their mission on earth, consequently the shorter their term of life. It seems consistent to believe that there should be a limit to the objects of man's existence here, and that when he has accomplished all that Providence designed for him, nature's law would relieve him.

From some cause the average years of human life have fallen off from 857½ to about 33 years. The skilled physician has ever failed to stay the decline in the average years of life. It does not appear upon the record that there was but little sickness in the early ages, yet the services of physicians are mentioned as far back as the days of Jacob. Moses says that his "body was embalmed by the first physicians." In this statement it appears that there was a preference shown to certain ones on the ground of qualification. Undoubtedly then, as is the case now, qualification was a matter of opinion, regardless of true merit.

In this country, where through the laxity of legislation on qualification, the profession is overplussed with those who presume to call themselves physicians and surgeons, which gives the afflicted such a wide range of choice that there is no inducement to qualify for the important position of physician, except to satisfy personal ambition. The people will in all cases seek a physician who is on a mental plane with himself, and the masses of the afflicted being comparatively of the uneducated, the consequence is that the educated physician, from inevitable fatality against himself, must look to the educated minority for professional support. To all these liberties of choice in this doctor-ridden country, the educated physician must humbly submit without complaint or debate.

Job in olden time judged the medical profession harshly, both morally and professionally, when he said, "the physicians were all forgers of his—physicians of no value." If Job was correct in his opinion, (and it is not my province to dispute him,) he must have had an extended personal acquaintance with their professional skill and their moral honesty to have known them all to be liars and forgers, and of no value professionally. We have no reason to think he would have made such an extravagant statement had he not believed it to have been true. We should bear in mind, however, that he was a sorely afflicted man, and perhaps his physicians did not understand the pathology of his ailments sufficiently well to give him the relief which he believed they might, and in his disappointment and fury he may have transgressed the generous rules of propriety when he charged them all as forgers of his, and valueless professionally.

It is a law of our being to make every effort to prolong life, notwithstanding it is in direct opposition to immutable law that all must die.

However much we may put forth effort to prolong life, the antagonism of nature that all must die will surely prevail at last.

Why man should be possessed of such intense desires to live, contrary to nature's law, is for wiser heads to determine. We unconsciously possess the former and must unwillingly submit to the latter.

From the fact that man becomes diseased by his own imprudences is evidence that he has forfeited his right to health, and in order to obtain restoration therefrom he must make use of artificial means commensurate with his violations of health laws, or submit to proportionate shortening of life in the end; but when from the use of appropriate remedies he finds himself restored to his former status of health the thought then arises that perhaps somewhere in the great laboratory of nature there may be a remedy which, if properly understood and administered, would prolong life until from the laws of waste the mind would willingly leave the body as a worn-out tenement.

This would be dying from old age, as did the antediluvians, but in this age of ambition and strife death by accident and murder is so prevalent that very few die with old age. The first reported death on earth occurred not from accident, disease, or old age, nor from a murderous hand, but from the combative hand of an only brother, but with no homocidal intentions, for death to the four human beings then on earth was an unheard-of event, therefore when Cain slew his brother he could have had no intention of committing a deed which all then on earth knew nothing of. I mention this event to show how man first became acquainted with death, and from that time life-preserving measures were first entertained.

The first death was instructive to the living, teaching them the possibility of all being liable to the same fate.

All are liable to accident, which may unexpectedly result in death; but should we escape all these and obey all the laws of life and health, and make use of all the remedial means which experiment and science affords, there is no antidotal power over death; and yet this known fact satisfies not man that his life may not be prolonged by the judicious use of remedies. The anxiety of the patient to live longer will permit experiment with any supposed remedy which his trusted physician may suggest. Practical medicine, then, was not a discovery, but the result of experiment upon the afflicted, and in thousands of cases without their knowledge or consent.

During the last decade there has been such rapid advancement in the healing art that in the opinion of those best informed the duration of disease incident to our country has been very much shortened and cures more certain. But if the average years of life is ever increased in this country there will first be a great reform in the diet and habits of the people and less dependence on uncertain medication in order to overcome the many ills caused by imprudences in diet and slavery to fashion.

As a nation we are living too fast—too many hours of our time which should be in rest and sleep are spent in business and luxury.

We must take more time to rest and sleep if we expect to prolong life. Sleep and rest are as necessary for the recuperation of our tired bodies as it is to eat and drink, and we must indulge in them to the full satisfaction of the demand or life is shortened. Parents never committed a greater mistake than when refusing their children all the sleep which their growing bodies demand. Sleep and rest are not acquired habits, but are in obedience to immutable law, and whoever, whether old or young, refuses obedience thereto will sooner or later suffer therefor.

Reform in diet is another important item if we as a people expect to prolong life beyond the present average.

The idea is almost universal that the more that can be crowded into the stomach, whether sick or well, the greater the contributions to life support. This is a great error, for it is impossible to force contributions beyond absorption.

Enough is all that nature has made provisions for and will reject any surplus, or else punish the transgressor with distress if repeated many times.

If man would imitate the beast in the field, by living upon one kind of food, the stomach would become accustomed to it and the appetite would call for no more than would be appropriated to the support of the system.

To insure good health and prolong life we should live on as few articles of food as possible; drink while eating no more than to moisten that which we have eaten; have no use for lamps with which to read or work; rise with the sun if not sleepy; rest whenever tired; wear loose clothes at home and abroad, and patronize the Doctor just as little as possible. There are some historical facts concerning the practice of medicine which may be of interest to relate on this occasion, as well as very many misplaced statements in regard to some of the different schools of medicine which should be corrected and thereby exonorate those who have constitutionally and by statutory law the right to think and practice without dictation by others. And to be better informed in regard to the profession generally it is competent to revert back to the practice of the fathers in medicine, which will ante-date all other professions of the present day. The practice of medicine stands on even date with the priesthood. It was a recognized profession in the days of Jacob and Job. The practice of medicine by the ancients was considered of divine origin, and the dispensers of medicine were objects of worship. In their day their scanty materia medica was a profound secret. Consequently the people in those days had no idea by what means man became a healer of the sick. Æsculapeus was venerated for his skill in the healing art. So wonderful was their faith in him that they believed in his power to cure after his death, and the prayers of the afflicted were addressed to him. He was of kingly descent, which added very much to his importance as a citizen and as a medical man.

His mother was a daughter of a Thessalian king, and it is reasonable to entertain the thought that every member of a royal family would receive a liberal education.

On this point we are informed that his father placed him under the tutorage of Centaur Chiron, who taught him the secret efficacy of plants. His great success in the healing art led people to believe that he could almost raise the dead. This evidently was an over-estimate of his ability, for immutable law can never be abrogated by man.

Prejudice in another's favor has ever been a trait of the human mind, on as small a foundation as ever it was against another, yet without doubt Æsculapeus deserved the praises of the people more than any other medical man in the age in which he lived. He was the first to bring the practice of medicine into a system. Hippocrates, born in the eighteenth olympiad, again revolutionized the whole practice of medicine and brought it into a science.

We learn from these facts that in their day the best scholars were ambitious for advancement, but all reformers in that age as well as this, must bear the persecutions of the lazy. Galen, who was born in Asia-Minor, in the year 131 of the Christian era, was eminently a scholar and physician and through his indomitable energies and skill he and his followers mastered the practice of medicine in and about Rome 1400 years with a materia medica confined exclusively to the vegetable kingdom. A notable fact here presents itself in the past history of medicine. Æsculapeus was taught the secret efficacy of plants. In succession Galen, the then world-wide champion of medical practice, follows with a materia medica running not outside of the vegetable kingdom for 1400 years, showing to us of the nineteenth century that the fathers in medicine had no occasion to rummage the bowels of earth for remedies with which to cure disease.

Galen's practice was exclusively botanic, and who in this audience disputes his success as a practitioner, but with all his success and his valuable works on medicine, he was so maliciously persecuted that to escape the furor of his enemies he was obliged to leave Rome for a more liberal field, where his success in the cure of the various types of disease would be better appreciated, but he was not long to remain there, for he was soon recalled by the Emperor as his family physician, two of his sons being then sick. This act of the Emperor again insured his safety in Rome, where he continued in practice until his death, at the advanced age of 140 years, and his name now stands upon the pages of history as one of the great masters in medicine of the age in which he lived. His system of practice prevailed triumphantly until the year 1493, when from the mountains of Switzerland came down Paracelsus, and in opposition to the Galenic system, introduced Quicksilver as an universal panacea for all the ailments of man. By some means, whether from the Galenic physicians or from the people, is not known, the Paracelsus remedy got the name of "Quack Salver." From this circumstance the word "quack" originated, and was universally applied to Paracelsus and his followers in allusion to the phrase "Quack Salver." The word "quack," which originated as above stated, has found its way into the dictionaries with a definition that it is "one who pretends to skill or knowledge which he does not possess." Theophrastus Bombastus Paracelsus was a full representative of the word quack, which is simply a modification of one part of the name of his newly discovered remedy, and his followers should willingly bear the distinguishing title of quack which their father brought into use and was applied to him by the people. It could not be applied to Galen and his followers, for the word was not known until Paracelsus instituted it. It is only and justly applicable to those who originally and now make use of quicksilver as a remedy (quack salver). Paracelsus was christened nearly correct when they gave him the name of Bombastus.

In making a mental comparison of himself with that of Galen, he made the astounding declaration to his audience "that there was more knowledge in his beard than there was in the whole of Galen, and that if God would not impart to man the secrets of medicine, it was right to consult the Devil." He claimed that he had "discovered the elixir of life which would prolong life to any extent." This notable man then was the founder of the mercurial practice, and to whom in justice the term quack was applied in the full exposition of his professional status. "One who pretends to skill or knowledge which he does not possess." But his followers in this day seem not satisfied with their true name, quack, and to rid themselves of the odium, they hurl it at the true followers of Galen—the Eclectics. The word quack was not in the English language for nearly 1400 years after Galen's death.

We have to credit Paracelsus with wonderful persuasive powers as a lecturer, for in his enthusiasm when advocating the merits of quicksilver as the "elixir of life" before the people, he overthrew the Galenic practice, and was permitted by the people to burn Galen's works before his audience.

The Eclectic practice then dates back to Galen as its founder, while Paracelsus is the founder of the mercurial or alopathic practice, which has been the dominant practice for about 300 years; but while this practice has comparatively legal sway over others, there has ever been a living preference among the people for the Galenic or botanic practice, and in the year 1820 Wooster Beach, of New York City, the Galen of modern times, came out from the school that graduated him, and with true heroism on reform, revived the Galenic system, and to-day the radiatory light from his pen has reached every part of the United States and the most intelligent parts of Europe. He was a man of education and sterling integrity, imbued with the noblest principles of benevolence and reform, and with the Galenic materia medica at his command, mentally he took issue with the depleting theory then extant in this country, and with his new theory and practice, he rose against combined opposition to such eminence as a physician in New York City, that he was favorably recognized by the City Board of Health, and was appointed physician to the United States Infirmary, and in the short space of three months' time thereafter he prescribed for over 1,000 patients. He was the savant from whom the present eclectic practice emanated, and from him as the beginning, it has now in the United States its tens of thousands of educated physicians.

With all due respect to that branch of the profession which came to life only about 300 years since, with Paracelsus for its father; and of which the sheet anchor in its materia medica was from the beginning and is now: Mercury, mercury. *Quantum Sufficit, Nolens Volens* for all the ailments of man. I think I am warranted in the opinion that not far in the future the people will render a verdict acquittal to the Eclectic school, and of guilty to the former.

The Eclectic principles east of the Sierra Nevada has ever kept even pace westward with immigration and when the rich mineral deposits of our beloved State claimed her share of the hardy pioneers the representatives of our school were among their numbers. And we now have our college in a prosperous condition with a faculty ambitious for the promulgation of eclectic principles—sending out her yearly quota of male and female physicians who will do honor to our cause wherever they may locate. Let us then be faithful to our calling—careful in our ministrations—trustworthy to the sick and distressed who confidentially look up to us as their physical saviour. Smooth their dying bed with true kindness that death now darkened by ignorance of its import may lose its ghastly dimensions and be transformed into a beacon light to the brief sojourner of time into the great and broad field of the future.

DIABETES.

BY DR. W. S. SPRINGSTEEN, OAKLAND, CAL.

OF this disease much has been written, many remedies prescribed and highly lauded, but I believe as yet no remedy as a specific is discovered. Perhaps the practitioner finds no disease which admits of his display of therapeutical tactics with so little satisfaction as diabetes; at least this has been my experience for nearly twenty years—as well in the climate of the Pacific Coast, as east of the Rocky Mountains. I am well convinced by my experience in the following case that climatic changes have no positive influence in favor of or against this disease. I desire to present this case in practice in order to show my experience with the rhus aromatica, although combined with other treatment, I attach great credit to this drug.

During my sojourn at the Government headquarters of the Nevada Indian Agency, at which post I was surgeon in charge, I was applied to by Mrs. H.——, wife of a well-to-do rancher, who desired my opinion of her case. She had lately returned from the East, where she had undergone treatment for diabetes. She had been afflicted for about two years, her disease resisting all treatment. She was advised to return to her western home, where, in the presence of her family she must be resigned and quietly wait the results of a pronounced incurable disease. Her case was truly a deplorable one. She was greatly emaciated, with almost constant (at least very frequent) desire to micturate; the amount of urine secreted and passed in twenty-four hours was enormous. Many times as high as twenty quarts in twenty-four hours. For many months this almost incredible condition of affairs existed. Her appearance depicted that of one far advanced in disease. The skin was dry and harsh, almost transparent, with odema of limbs, urine very high colored, with a sickening odor; diarrhœa was often present ; tongue glazed and furrowed. Had noticed different times hectic flushes; was very languid, and feet and hands cold, nearly at all times *(Bulimia)* accessneo; appetite attended with balydipsia, or great thirst; abdomen distended, and in fact all the symptoms of an advanced and hopeless case.

I made a careful diagnosis and submitted the urine to a chemical test, and found sugar to excess. I also bottled up some of the urine and sent it to Professor D. D. Crowley as an interesting case of true diabetes; he also made a test and reported like results to my own. With but slight assurance of a cure, I prescribed for the case. Perhaps a fortunate relief for the patient, I had the advantage of knowing just what remedies she had tried, as her physicians in the East kindly furnished her with duplicates of what prescriptions she had received from them. I will enumerate a few of the most prominent, which was opium, nitrate potass, valerian, ergoto, iron, alum, tannic and gallic acid, quinine, creosoto, etc., etc., not omitting thorough blistering on the nap of the neck, scars of which remain yet as a gentle reminder of (regular) science.

I first ordered a regimen of diet. I allowed her to partake of onions, cabbage, spinach, celery, lettuce, jellies, etc., I also recommended beef, mutton, lean pork, eggs, butter, poultry, game, milk, and finer pastry of all kinds; potatoes, all sweets and articles containing starch to be avoided; tea and coffee was allowable, sweetened, if need be, with chemically pure glycerine. I required that no spirits be indulged in only as actually required to keep up strength. To quench the excessive thirst, I recommended lemons sliced up with glycerine to sweeten, which remedy acted like a charm to fulfill the indications. I then advised all the out-door exercise possible, and to bathe regularly three times a week in water containing a liberal quantity of rock salt, after which she would be sponged off with a bath containing sulphuric acid. A tonic seemed very much in order, which I prescribed: ℞ Fld. ext. Chlo. Iron, et. Gentian ʒiij, Fluid Hydrastis, ℥j. M. Sig. A teaspoonful four times a day.

I then at same time gave:

℞ Benzoic acid, ʒ ij.
Phosphate soda, ʒ iv.
Bicarb. soda,
Po. gum acacia, āā ʒ ij.
Spts. ether nit., ℥ ss.
Aqua M. pip., qs. ad ℥ vi.

M. Sig. A teaspoonful three times a day.

Continued this line of treatment for one month. I was not exactly satisfied with the degree with which it tended to lessen the discharge of urine. I then discontinued the benzoic acid mixture, though it did materially lessen it, and the patient seemed to gain strength, though I changed and switched on the famous rhus aromatica.

℞. Rhus arom., ℥ iij.
Apocynum conab., ℥ ss.
Glycerine, pure, ℥ ss.

The patient, who one year before was sadly afflicted with a pronounced incurable disease, was restored to almost perfect health. Now, I attribute much of our success in the above case to perseverance on the part of my patient. I prescribed the remedies, to be sure, and she observed in every case to follow my instructions, without which the physician need not expect the wonted results from his medicines.

Again, the acid in bathing is perhaps a good theory, but is the great virtue accredited to the rhus arom. possessed in that article? For one, I believe it to be a boon to humanity. The fact is, many physicians will say a teaspoonful three times a day for four weeks. By this time a very marked change for the better was noticeable, and somewhat encouraged and disposed to let well enough alone, I continued this treatment with no change, except I increased the dose to a teaspoonful four times a day, which was, perhaps, well enough; at least, it was evidently beneficial. At the expiration of three months my patient was able to return home, and her once enfeebled system began to take on, as she expressed it, new life, new vigor; her skin was soft, and a good, healthy color. She became fleshy, and having continued the medicine, with (at the same time) strict hygienic observances, for about eight months. They cannot get the result from it, perhaps, they expect to. This may be accounted for, possibly, because they *do not* persevere in or continue the administration of the drug long enough. Diabetes is a disease that, when the doctor is called to examine, he must not promise too much or too rapid a recovery. It is a serious affliction, and a patient who once recovers from it is fortunate.

My opinion of the rhus arom. is "way up," and I am now treating a case in this city. The results from the rhus arotico thus far are decidedly satisfactory. I shall be pleased to refer to its success.

SELECTIONS.

SEQUELÆ OF CIRCUM-UTERINE INFLAMMATION—SALPINGITIS—CHRONIC DILATATION OF FALLOPIAN TUBE.

A CLINICAL LECTURE BY PROF. EDWARD W. JENKS, M. D., OF CHICAGO.

THE patient, first requiring attention to-day, states that she is twenty-six years of age and unmarried. Regardless of what she says about being married or single, we find the perineum bearing unmistakable marks of childbirth; so does the uterus, which is large, low in the pelvis, and its cervix sufficiently lacerated to be easily discerned by the touch.

The history of her illness, as related by herself, is brief, and not wholly satisfactory, as she will not acknowledge that she has been pregnant, while there are reasons for believing that pregnancy is a very important factor in the case. She is a house servant, and has been obliged of late to give up working and enter the hospital, chiefly on account of general debility, accompanied by pain in her back, hypogastrium and right inguinal region. She states that two and a half years ago she had a severe illness, when for many days she experienced severe pains in the lower and right portions of her abdomen, with fever, chills, and tympanitis. Since then she has had a number of similar attacks, but none so severe or protracted. However, there has not been a day entirely free from pain, while a profuse leucorrhœa has been almost constant. For a few days prior to entering the hospital, the pain was intense, with a higher temperature than normal. Since the beginning of the illness menstruation has been irregular, both as to times of occurrence and quantity of fluid. We perceive that now the abdomen is somewhat tympanitic and tender to the touch.

Proceeding with the physical examination, we discover that the cervix uteri, in addition to being lacerated, is also tender to the touch, and by introducing two fingers into the posterior cul-de-sac, the body of the uterus is found to be equally so, nor is the entire organ as movable as it should be. By pressing with only a moderate degree of force at the roof of the vagina, pain is produced. By means of a finger in the rectum, the increased size and tenderness of the uterus are perhaps better determined. By aid of the speculum, we find the *os uteri* gaping and filled with mucus, and in appearance corresponding with the so-called granular erosion, yet by the use of two tenacula, after the manner with which you are familiar, the apparent erosion disappears, and is found to be due to laceration.

Passing a flexible probe into the uterine canal, the *fundus* is reached at the depth of about three inches. But, as I change the direction of the instrument, a new feature is apparent. You see that as I turn the point of the probe to the right of the median line of the uterus, it passes up four inches more, making seven inches from the *os tincœ.* There is no obstacle preventing its passage still further, but as it might do some damage, I do not choose to determine the full distance it can be inserted. Now the question of diagnosis becomes more complicated than it seemed prior to using the probe. When a probe can be introduced into a non-gravid uterus to as great a depth as in this instance, there must be one of the following conditions:

First. A uterine tumor causing the canal to be elongated. Second. The probe passes through uterine tissues into the peritoneal cavity; or Third. The instrument passes into a dilated fallopian tube. That you may easily see for yourselves, I now proceed to probe the uterus through a speculum, repeating the operation a number of times, and turning the point of the instrument in various directions. The *fundus uteri* is easily determined by giving an impulse to the probe with one hand, and placing at the same time the other over the hypogastrium. The point of the probe being turned to the right it traverses without obstacle or difficulty an additional distance of four or more inches—but when turned to the left no such result can be obtained. As previously stated, menstruation has been irregular both as to time and quantity of fluid. Sometimes the quantity has been very great so as to constitute menorrhagia. By coupling this with the uterine measurement one might easily be mislead in diagnosis, if the probe were relied on wholly. By manual examination I am able to exclude the existence of a uterine tumor, as when my finger is in the rectum the *fun-*

dus uteri is easily felt; further, by bi-manual examination the outlines of the wòmb are easily determined, the *fundus* being but a very little above its normal location at the pelvic brim. Being positive that each time the probe passes beyond the *os tincæ,* a distance of seven inches, it does not go into the peritoneal cavity, there remains but one other route for it to take, and that is a fallopian tube; further, as it is each time to the right and cannot be made to behave similarly when turn to the left, the tube which is thus probed must be the right one. We, therefore, have in the patient before us, an instance of dilatation of the right fallopian tube. Now directing attention to the cause of this pathological condition, we observe that for two and a half years she has been suffering in consequence of an acute inflammation of a portion of the pelvic organs, which doubtless was initiated as a puerperal affection. One of the lesions has been an inflammation of the lining of the right fallopian tube, in other words, salpingitis. This term strictly means inflammation of all portions of the fallopian tube, yet practically it refers only to the lining and substance, for if the covering is inflamed it is spoken of as a peritonitis. In this case the salpingitis has been succeeded by a chronic dilatation. It is this peculiar feature of the case to which I wish more especially to direct your attention, but before saying more in relation to it, I wish to briefly refer to other pathological conditions of which there is quite a number.

The uterus is in a condition of sub-involution and there is a uterine catarrh, both of which are maintained and aggravated by laceration of the cervix. The immobility of the uterus and excessive tenderness of all the circum-uterine tissues are the remains of an acute inflammation, of which she has had several attacks of greater or less severity. If the pelvic inflammation did not have its starting point as a puerperal disease, the condition of the genital organs in consequence of child-birth rendered her more liable to be subsequently attacked by it. There are many pathological possibilities in connection with this case which might be interesting and even profitable to discuss, but we will omit them and consider only what is strictly pertinent to the condition in which we find the right fallopian tube.

Salpingitis, if of long continuance is not always followed by dilatation, on the contrary, contraction or obliteration may ensue, the patient then being rendered liable to dysmenorrhœa or sterility.

Dilatation of the fallopian tubes occurs in consequence of endometritis, chronic catarrh of the uterus, and complete vulvar, vaginal or uterine atresia. Acute inflammation of the lining of the tubes from any cause may be the primary cause of their dilatation.

In the puerperal state an acute inflammation of the endometrium not unfrequently extends to the tubes. The same is true of chronic inflammation. Now as the acute symptoms subside or the inflammation merges into the condition called chronic, the hypersecretion of the mucous lining of the tubes causes this distention.

In any one of the varieties of complete atresia before mentioned, dilatation of the fallopian tubes is in consequence of the accumulation of menstrual fluid, in truth, one of the chief dangers to life where atresia exists is the liability to rupture of an overdistended fallopian tube.

When salpingitis becomes chronic one of the most common accompanying symptoms is leucorrhœa. Some authorities have stated that this is the case whether there is dilatation or contraction of the tubes.

If chronic dilatation exists, vaginal injections are not perfectly free from danger, while intra-uterine injections are especially dangerous, for the reasons that the fluid used, may enter the tube and then escape with great ease into the peritoneal cavity, and thence into the vagina. The admission of the blandest liquid into the peritoneal cavity in this manner is apt to cause sudden death, or at the least very threatening symptoms. This patient illustrates several important points in connection with diagnosis; particularly as to the value of the uterine probe. The stiff unyielding Simpson's sound would doubtless fail to reveal the condition of the fallopian tube. I will not use it to ascertain, for the reason that I do not as a general principle approve of that kind of a probe; it is capable of doing much serious damage even in careful, experienced hands. The probe to be used should be either of pure silver or some flexible material.

When the point of a probe reaches beyond the os a distance of several inches, the most frequent reason is that there is an intra-uterine tumor. I have, myself, had a patient who from this fact alone was said to have a tumor within the womb, yet I failed to find any, but I discovered that the probe passed into a dilated fallopian tube.

In Thomas' work on "Diseases of Women," mention is made of a few cases of dilatation coming under the author's observation, which were diagnosticated by means of the probe. Hildebrandt relates two cases where the probe was passed into the tube. Noeggerath, Matthews Duncan, and others have reported cases, but the number of authors who have written on the subject is limited, doubtless for the reason that even among gynecologists of large experience the cases to be met with are not many.

There has been some discussion in regard to probing the fallopian tubes, and some who were consided competent to give sound opinions have gone so far as to express doubts in regard to its ever having been done. This is not surprising when we consider that the diagnosis of tubal disorders is always difficult and obscure. It seems to my mind that so plain a case as the one before us could not but convince the most skeptical.

One of the principal dangers which constantly threatens a woman, with such a group of symptoms as this one presents, is the lighting up anew of acute inflammation of the circum-uterine tissues. Of these, inflammation of the pelvic peritoneum is the most to be dreaded, as it is the most dangerous. As regards the treatment of this patient but little need be said, for the reason that of active treatment but little is required. Rest and time for recovery are of major importance. It is important that there should be as perfect rest of the generative organs as is possible. Coition should be avoided, and if at any time the symptoms become aggravated, not merely indicating salpingitis but any variety of pelvic inflammation, the remedies to which resource may be had are leeches, opium, hot fomentations, and hot vaginal douches. The latter are to be used with caution, never in the sitting posture, but in the recumbent only, owing to the sphincteric action of the tubes being impaired and the liability of the injected fluid being forced into the uterus and thence into the peritoneal cavity.

LISTERISM.

BY A. J. HOWE, M. D.

SOME of the readers of the *Journal* may think that Listerism has become "stale, flat and unprofitable," while others are by letter requesting me to give my views of the system, and of antiseptic dressings in general. Seekers for such information admit that they have seen many articles on the subject, but through haste or inattention have failed to comprehend its methods and principles.

At Detroit, in 1878, before our "National," I said: "Lister's method has one leading point in view, which is *that no bacterial germs have access to a traumatic surface.*

"It has been proven and generally admitted by scientists that the ordinary atmosphere, when above the freezing point, is swarming with the germs of putrefaction—with minute organisms called bacteria, vibriones, and other microzymes—and that it requires much care and skill to destroy these in the immediate vicinity of wounds, and to prevent their lodgment and reproduction on moist animal structures."

To explain the method, I said: "At the international Medical Congress, held in Philadelphia during the 'Centennial,' Mr. Lister was present, and dressed several wounds to show exactly his manner of applying the textiles. He first laid upon the wound a piece of oiled silk well covered with copal varnish, and recently wetted in the carbolic solution. A strip of antiseptic gauze was next laid upon the silk cover as an absorbent wrapping. The next layer consisted of lint or wadding which had just been dipped in the antiseptic solution. The manipulation is carried on under a cloud of spray, the vapor being forced in and upon each envelope as it is put in place. Over the whole is bound a roller of glazed fabric called Mackintosh. Every re-dressing is to be conducted in the same manner and with the same scrupulous care to avoid the entrance of putrefactive germs." * * * "In hospital practice the anti-septic system of treating wounds is easily executed, but in the rural districts old plans will have to do for the present. Every practitioner in city and country is not going to keep at hand the somewhat costly materials needed to execute an antiseptic dressing. Besides, wounds will, as in times past, continue to heal 'without having a fuss made over them.'"

The above quotations show that I was familiar with Listerism as soon as it was known anywhere, and that I then questioned its ability to endure in its entirety. I exhibited a spray producer, and the several textiles recommended by Lister. In fact, I applied the dressing before the Convention.

At the following "National," which was held at Cleveland, I said: "Instead of employing the complicated dressing of Lister, which is often impracticable, and occasionally unsatisfactory, I have generally made use of a solution of thymol, and obtained excellent results in the treatment of wounds. Thymol is much less objectionable as an odor than carbolic acid. It seems to me, from my experience, that the use of thymol as an antiseptic must at length supersede the dressing of Lister."

At Chicago, a year later, I said: "Listerism leads as a surgical topic, and is likely to command more attention for years to come. Yet, admitting so much, I still feel that the elaborate scheme of the distinguished inventor will never be carried out in the general surgery of the world. In making this statement I would not be understood as underrating the discovery, or as being opposed to its practical application. Listerism will do an infinite deal of good even if it be not scientifically applied. It has emphatically taught the novice in surgery that sepsis is the bane of our art. Blood poisoning must be guarded against most vigilantly."

A year later, at St. Louis, I said: "Listerism is a topic which has gained in importance from the fact that it begins to be assailed in high places. Two years ago it carried all before it like a torrent, no one being bold enough to attempt to stem the onset. At length a feeble voice was raised against the novelty, and the question was asked, why we did not kill all traumatic patients in times past, or allow them to die with bacteria? In the course of time cases of wounding were carefully treated *without the use of carbolic spray*, and placed in competition with others managed according to the most approved methods of Joseph Lister; and it was found that the spray did some harm in most instances, and that the very best results followed careful dressings conducted without a Listerian adjunct. However, it is not to be supposed that we are to go back to slovenly ways because the expensive and troublesome methods of Lister are not essential to good surgery. On the contrary, so much that is valuable has been accomplished by scrupulous attention to nicety and cleanliness that we are encouraged to push the point in that direction till still better results are obtained through carefully manipulated dressings."

The above quotations exhibit my public teachings of Listerism ever since its invention. My first, middle and last words are plain and consistent. There is no misunderstanding, misrepresentation, nor equivocation. I treated wounds all the time, and commonly employed means to evade sepsis; sometimes I made use of carbolic acid in more or less dilute forms, occasionally borate of soda, and generally thymol. A guide to impending evil was the sense of smell. Antiseptic surgery I commend, but not "pure Listerism" which zealots say must be employed in full or all is lost. Experimentally and practically I know better. I do surgery enough to learn empirically many things which medical men of less opportunities should not assail with theories and hearsays. I admit that Listerism pretends to be *scientific*, but a great many crude errors are credulously swallowed under that name, and not a few frauds perpetrated under its shield. Mr. Bantock has shrewdly said that "antiseptic surgery (meaning Listerism) is founded on a theory that has not been proven, and is probably not true." The editor of the *London Lancet*, for September, in summing up what had been done with Listerism in the "International," says: "Carbolic acid has undoubtedly had its day: the spray which by some has been considered one of the pillars of the system, has been abandoned by many of Mr. Lister's most ardent followers, and he himself has spoken of it as likely to become unnecessary. The gauze, too, is being replaced in some hospitals by more absorbent, softer, and more elastic materials."

It is well known that vinous fermentation takes place upon the introduction of a yeast-plant into a saccharine fluid, the sugar by the process being converted into alcohol and carbonic acid. The fermentation is not produced by the plant itself, but by its *growth*—by germination or reproduction. An active principle seems to be developed by vegetal activity which is a "*ferment*," and may be poisonous. Homologous to the vegetable *ferment* in a vinous or saccharine fluid, is a septic principle evolved during the multiplication of bacteria in animal fluids, and which is regarded by enthusiasts as the "essence of plague and pestilence." If we stop to think a minute we shall know that bacteria, in the "mingling of cosmic dust" are quite harmless organisms. They dance in sunbeams and swarm in the air we breathe—they fall into the fluids we drink, and upon the food we eat. As a keen writer has said: "It is quite clear that if bacteria were possessed of the terrible powers attributed to them they would soon have the world to themselves, having eaten up or decomposed all other organized beings."

From observations made of late it would seem that it is not the bacterium itself which is poisonous, but the *product* of the organism, and may be compared to the *ferment* developed during vinous fermentation. If this way of looking at the principle be true, we need not strive to keep bacteria from a wound, but should aim to neutralize or render innocuous the products of their germinal activities. An open and exposed traumatic surface may have millions and billions of microzymes on it, yet be kept sweet with thymol and other antiseptics. When this rational idea is understood we shall hear less of those who would "fence out" the presumed producers of putrefaction.

It is pertinent to the subject to affirm that such bacteria as first enter an organic infusion do not evolve a septic poison, but only succeeding generations develop the virulent agency. They enter as little rods which disengage no septic principle and impart no poison, but during the first transformation a virulency is disengaged, though in a moderate degree. While subsequent reproductions take place the poisonous agency is evolved in more concentrated forms. Each new crop of micrococci brings with it a more and more impressive virulence. Now if this virus be neutralized or rendered innocuous as fast as it be evolved, the wound invaded will remain aseptic. Lister, laboring under a misconception, set himself about hunting germ slayers, and took up with carbolic acid, not realizing that the agent would sometimes kill the patient as well as the 'zymes. In his grand scheme he had two objects in view—if one failed the other would succeed. If the "spray" did not drive all the 'zymes away, the germicide would destroy them. But, if the germicide be reliable, why bother with the spray? The agent would kill a million as surely as it would a thousand. Then what folly would be the introduction of a "protective," a lot of absorbent and antisepic "gauze," a mass of carbolized "lint," and over all a glazed "Mackintosh?" Here are four separate and distinct layers piled upon a minor wound in hot weather, perhaps when one—the antiseptic lint—or some innocuously aseptisized fabric, would do better than "pure Listerism."

The heedless devotee of Joseph Lister has such faith in the efficacy of his system, that he dogmatically accredits failure to some imperfection in the manner of using it, "some unconscious neglect of details which are absolutely essential to success." So punctilious must the dresser be that he is not to leave an uncarbolized fly speck on the under side of the Mackintosh! The authentic dressing of Mr. Lister is not generally understood. As before intimated, his plan is to shut out bacteria from a wound, and then to keep them out. The spray is the agency in the shutting out process; the protective is to keep the carbolic acid from irritating the flesh; and the gauze, lint and Mackintosh are to keep bacteria from gaining entrance after the dressing is completed.

The antiseptic dressing without Listerian adjuncts, is to cleanse a wound and keep it clean and sweet. A weak solution of thymol is competent to do this. A pledget of what is denominated surgeons' lint, dipped in the antiseptic solution, and then applied to traumatic surfaces, will keep down putrefaction, and render the wound innocuous or incapable of absorbing poison. In fact, there is no poison to be absorbed.

It will be seen that there is a marked difference in the two schemes; and let the reader rest assured the latter is much safer and simpler than the former. In one case the 'zymes are fenced out, or attempted to be; in the other the ferment is rendered innocuous,hence I have branded the spray and the gauze as the frivolities of Listerism.

The leading surgeons of Europe are abandoning the spray, and using non-irritating lints that absorb purulent and putrescent discharges; and with them short drainage tubes are in vogue. In regard to the latter I venture to make a few remarks. If the abdominal cavity has been opened and traumatism committed inside, it is generally best to prepare to drain off septic fluid that may accumulate in the peritoneal sac, and do fatal mischief. Drainage may be effected through the peritoneo-vaginal septum of a woman, but at some point of the abdominal incision in a man.

In cases of empyema the drainage tube of Chaissagnac—a small rubber pipe with holes cut into its sides—may be employed, or incisions so free in the thoracic walls that fluids may flow out without hindrance.

The cut made to relieve a strangulated hernia needs no other drainage than that secured by packing the wound with thymolized lint.

The traumatism produced by the amputation of a mammary gland, should be dressed with thymol and lint, or with a soft textile wetted often in a solution of borate of soda.

The flaps of an amputated leg or arm are to be accurately adjusted, and held in apposition with sutures and adhesive strapping; and if they be carefully approximated there are no sinuses nor pockets of pus to evacuate through the agency of glass tubes or hollow chicken bones. More is said about drainage than is likely to be instructive, or add to the reputation of surgery. Generally no drainage tubes are needed in an amputation or in a big incision made to remove necrosed bone. If a stump be well dressed there are few nooks and crannies in which pus can accumulate. If all parts be gently yet snugly compressed there will be union by the first intention. The chasm made to gouge away dead bone or to remove a sequestrum, should be packed with antiseptic lint, and redressed twice a day.

In this place I will remark that Lister is not the inventor of antiseptic surgery, but of a scheme based on the germ theory of disease—he aimed to exclude the infectious micro-organisms from traumatic surfaces. And this calls to mind that from present indications we are to have "a run" of germ theories and microbe demonstrations. The bacillus of scarlet, typhoid, splenic, and other fevers is to be described and scientifically named; and ways and means are to be invented to keep the various provocatives of disease from invading the animal economy. It is frightful to think of the ravages these newly discovered microscopic 'zymes may commit. One kind will kill chickens, and another bovines. It will be perilous to feast upon fish, flesh or fowl, we shall have to become vegetarians. And when we have become accustomed to a plant diet, some ruthless scientist will discover a minute 'zyme or phyte in our cabbage, and another variety in parsley or pumpkins. What a prospect there is for future Listers if the people are to be saved from utter demolition!

THE PHYSIOLOGICAL TREATMENT OF PNEUMONIA.

By J. Turner Everett, A. M., M. D., Sandusky, O.

During the progress of the late animated and somewhat heated discussion of the subject of venesection as a therapeutic agent in the treatment of pneumonia there has been elicited many interesting and instructive facts. In all this correspondence nor in any text books which I have consulted has there been any mention made of a plan upon which I stumbled some years ago, and which, in my hands, has served the purpose of all the antipyretics, without any of their dangers, and which acts promptly and certainly upon the diseased tissues, without involving systemic or organic complications. Omitting all discussion of the etiology or pathology of pneumonia, or meandering among the myriad mythical distinctions of kind, type, and stage of invasion, I will at once give the particulars of what I have styled *my method;* for, although I have seen no mention made of this ideal in the literature, yet, the more one contemplates the simplicity and the rationality of the theory, the more one is struck with wonder that it has not been pursued centuries ago.

In nearly all tissues where the danger depends upon high temperature, and the consequent destruction of functional activity, the direct abstraction of heat has been the first step in therapeutics. This by the application of cold directly to the invaded part, or in its nearest possible neighborhood. Thus, in cerebritis, the ice-cap; in spinal congestion, ice-bags along the region of invasion, etc., *ad infinitum.*

It is universally conceded that the danger in pneumonia consists primarily in the pulmonic engorgement, and that the remedy lies in decreasing the blood-pressure in the tissues, either by reducing the force and frequency of the heart-beat, by lessening the contractility and tonicity of the vascular walls, or by decreasing the amount of blood in the general system.

All of these and each of them produce the same general result, only differing in the rapidity and certainty of action. If colds acts as a sedative and as an astringent upon capillary vessels, and as an abstractor of heat, why not apply cold directly to the seat of primary invasion in this as in other congestions? The truth of this proposition will doubtlessly be readily admitted, but the query will arise, how shall we apply a cold bath to the lungs? We cannot use cold compresses over the chest, for fear of increasing the congestion by driving the peripheral blood into the already engorged lung, neither is the general use of the cold bath advisable, for the same reason. The solution of the difficulty, then, lies in applying the cold directly to the mucous surfaces of the air-passages of the lungs, to their finest and most distant ramifications, by *means of inhaling cold air continuously.* I say continuously, for the interrupted use of cold air, like an interrupted cold bath, would act as a stimulant instead of a sedative, and thereby augment the difficulty we seek to control. While the patient is inhaling the cold air, the temperature of which should range from 10° F. to 15° F., the room in which the patient lies should be kept at a temperature of from 80° to 85° F. Thus the afflux of blood is changed from the central organs to the periphera. The cold air, coming in direct contact with the tissues of the pulmonic parenchyma, abstracts heat from the blood by coming in such close contact with it over such an extensive area, being in the bronchioles, as you know, separated from actual contact only by the thin cells of the pavement or tessellated epithelium, where each globule of blood and atom of serum is subjected to a direct refrigerating influence, which can be observed and controlled with the most exact and satisfactory results. By carefully noting the external temperature and that of the patient, this abstraction of heat can be regulated with the utmost nicety and precision—can be commenced or stopped instantly, without prostrating the nervous system by sedatives or narcotics, and without the loss of blood.

This cold air, in thus coming in contact with the lung-tissues, causes contraction of the vessels, thus lessening tbe amount of blood admitted to the lung tissues, and by its constringing influence tends to drive out that which has become partially deposited by the stasis, while by increasing the oxygenation of that already admitted it hastens resolution. The increased heat of the air surrounding the patient favors copious perspiration, thus, by the evaporative process, favoring the additional abstraction of heat. Of course, we must keep in view the fact that this agent, like venesection, veratrum, or any other anti-pyretic, would be useless after stasis occurs, and should therefore, like them, be used only during the stage of hyperæmia.

Fortunately for the more perfect employment of this remedy, Nature has provided us with a boundless supply, and as the great majority of the cases occur in the colder months, we have only to connect the lungs of our patient, by means of an elastic tube, of sufficient calibre, with the external atmosphere, and we have the remedy in unlimited supply. In treating the few cases which might occur during the warmer months, the air should be drawn through a refrigerator. This being charged more or less with aqueous vapors, would not be quite so effective and pleasant as the clear, dry, cold air of winter, yet would serve a very useful purpose, and produce the same general effect.

FIXATION OF MOVABLE KIDNEYS.

HAHN (Centralblatt für Chirurgie, July 23, 1881,) has devised a substitute for nephrectomy, in case it would be indicated simply by reason of excessive mobility of the kidney. The operation, which has been twice performed, is as follows: The patient is placed on the side opposite to that of the affected organ, an incision is carried along the outer border of the corresponding sacro-lumbalis muscle from the lower border of the twelfth rib to the crest of the illium, successively dividing the skin, the latissimus dorsi and the external layer of fascia enveloping the sacro-lumbalis. The sacro-lumbalis is then drawn toward the median line, after which the quadratus lumborum muscle, and the fibrous layer of the peritoneum are incised. It may be remembered that according to Arnold, the kidney is not entirely extra-peritoneal, the anterior surface of the organ being covered by the serous layer, and the posterior surface by the fibrous layer of the peritoneum, so that an incision through the latter does not necessarily involve an opening into the peritoneal cavity. Pressure is now exerted upon the anterior surface of the abdomen, so as to force the kidney into the wound, to which it is attached by eight or ten catgut sutures, after which the whole wound is plugged with carbolized gauze. There was in these two cases no reaction; the first dressing was only removed on the fifth day, the subsequent ones at corresponding intervals. In about four weeks the wounds were almost entirely healed, and the kidneys were found firmly fixed in their new location. In both cases, however, a slight degree of mobility could be detected at a somewhat later period. It would seem advisable, therefore, to strip off the adipose capsule from the posterior surface of the kidney and then to stitch this part of the capsule into the wound; it would also be preferable to fix the kidney as low down as possible, in order to give the organ a firm support, and to prevent any tension upon the seat of fixation during the upright posture. Experience teaches that a dislocated kidney creates no disturbance, no matter how low it is placed, so long as it is firmly secured in its new location.

RUPTURE OF THE UTERUS TREATED BY DRAINAGE—RECOVERY.

On March 26th, A. C——, a woman at full term, was brought into C. von Hecker's wards, in Munich, in a state of extreme collapse, with the objective signs of rupture of the uterus. The lower extremities of the fœtus could be felt immediately behind the abdominal parietes, in the right hypochondriac region. On the left side the firmly contracted body of the uterus was felt, and just above it a soft mass was perceptible, evidently the placenta. Per vaginam, the fetal head was found just above the inferior strait. It was stated that previous to the arrival of the patient in the hospital the pains had been uncommonly strong, and had been further stimulated by the administration of ergot. At the time of admission, however, the uterine contractions had ceased, as is usually the case when rupture has taken place. The forceps was immediately applied, and three tractions sufficed to deliver the head, the rest of the body following immediately. Vaginal examination now disclosed a large rupture in the cervix, penetrating through all the coats; it was extensive enough to have admitted the passage of the hand into the peritoneal cavity. The fingers were introduced through the rent, following the umbilical cord to the placenta, which was situated on the left side, as previously diagnosed, and was readily extracted. The condition of the patient was not materially altered by these manipulations, so that stimulation was not resorted to. Next morning the abdomen became very painful and tympanitic, and vomiting of green fluid, which had been present previous to delivery, recurred. Accidental circumstances prevented the introduction of a drainage-tube until thirteen hours after delivery. When once in place, however, it gave exit to a considerable quantity of sanguinolent fluid, which continued to drain away slowly for some time. There were frequent calls to empty the bladder, so that the catheter was finally resorted to, and enormous quantities of urine evacuated. During the next few days ice compresses and opium were sufficient to overcome the peritoneal irritation. There were profuse and fetid fecal evacuations, which seemed to exercise a favorable influence on the condition of the patient, but which caused the extrusion of the drainage-tube on March 30th. On reintroduction of the latter more sanguinolent fluid escaped, but the quantity rapidly decreased. The temperature did not rise above 38° C., and in two weeks the rupture was firmly cicatrized. The above case shows that drainage is the cardinal point in the treatment of rupture of the uterus, as the danger in these cases consists in the retention of septic fluids in the peritoneal cavity. Of late several successful cases have been reported, in which the line of treatment pursued was essentially the same. In some of them the abdominal cavity was also washed out with antiseptic lotions, usually two per cent. solutions of carbolic acid. Among the advantages of this method of treatment are its simplicity and easy applicability, which recommend it to the country practitioner, in whose practice such cases are especially apt to occur, because of the long time which often necessarily elapses before the services of a physician can be secured. If possible, however, irrigations of the peritoneal cavity with carbolized solutions should be dispensed with, as they are by no means free from danger.—*Centralblatt für Gynäkologie*, May 14, 1881.

THE LONDON MEDICAL MAN.

MESSRS. EDITORS: In these pages I will endeavor to describe to you, so far as lieth within me, the London Medical Man in all his stages, from all his aspects. I will touch especially on his education—preliminary and medical—his earlier years of practice, the divisions of practice, his finances, his way of doing business, his manner of living, discouragements, enjoyments and social position. I speak from five months' residence in London, in daily contact with the London medical man and his work in the hospitals, schools of medicine, and private practice, and his social world. Also, from having interviewed men in the various divisions of the practice, and the various stages of life; also those who look on and see from an impartial and unbiased stand-point.

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Just here may be given the two great divisions and the four subdivisions of those who in the United States would come under the title of doctor. First are the physician and surgeon. Then the general practitioner of medicine, the consulting physician, the general practitioner of surgery, and the consulting surgeon. These four divisions are quite definite.

The general practitioner of medicine generally does not have a literary degree, but passes his matriculation examination at the Royal College of Surgeons, Royal College of Physicians, Apothecaries' Hall, one of the Universities, or at the Hospital Medical School at which he enters, or at one of the numerous other places. As an example of their nature I will quote the requirements of the matriculation of the Royal College of Surgeons: a certificate of having been registered by the General Medical Council; writing from dictation; English grammar; writing a short English composition arithmetic, geography, English history, mathematics, algebra, through simple equations; Euclid, books I and II; translations from Cæsar de Bello Gallico. These are compulsory, besides which are a number of optional subjects. His studies are only recognized from the time of his registration. He may have studied any length of time before his name is placed on that public register, but it is no good as to time. He then either goes to some recognized provincial hospital for eighteen months, or goes as the pupil of some legally qualified and registered practitioner for the same length of time. Said practitioner must be connected with a hospital, dispensary, or hold a poor-law appointment, so as to be enabled to give his pupil instruction. Not more than eighteen months of such study as the above is recognized by any of the licensing bodies. Such study is becoming more infrequent and unpopular, the student generally going immediately into his hospital medical school. It is strongly recommended that the pupil pass his preliminary examination before endeavoring to do anything at medicine, so as not to have too many irons in the fire. At least two and one-half years of the four years required must be spent at a medical hospital school, including three winter and two summer sessions, the former six months and the latter three months each. Thus the English *annus medicus* equals nine months. A hospital, to be recognized by the licensing bodies, must have 150 beds. All of the first and a greater part of the second year, he spends with the bones, the anatomy, in the physiological laboratory and dissecting room, practical pharmacy, lectures on materia medica and botany, peeping occasionally into the wards and out-patients' rooms, and of course being a regular attendant on the "capital operations," and prepares for "the first college exam." This passed he enters regularly into the study of medicine. He clerks, or, as the English say, "clarks," with the *a* as broad as you can make it. This he may do in either the wards, out-patients, or special departments. It consists in examining the patients, taking notes or histories, and generally assisting the physician in charge and endeavoring to answer all the questions put to him by said physician. This he must do for six months. He hears lectures higher in the scale, including medicine, surgery, midwifery and gynæcology, instruction and proficiency in vaccination, pathological anatomy, forensic medicine, and does post-mortem work. Having completed four years' study under the above regulations, he is permitted to come up for his pass examination. A large per cent. fail the first time and are remanded for three or six months. There are nineteen licensing bodies in Great Britain, and he has his choice. None of the applicants for license are allowed to be examined by their own teachers. A majority do not get into practice for five years. The general practitioner, after receiving his license generally settles down to business in some modest house in a modest street, and takes unto himself, probably, a modest wife. He usually takes the license of the Royal College of Physicians, or the license of the Society of Apothecaries, with probably a surgical degree. During the first two or three years after this he takes the M. D. degree from Oxford, Cambridge, London, Durham or some other of the Universities.

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The general practitioner of surgery and the consultant in surgery, differ from their brothers, the physicians, in their education only, as you can easily imagine. They pay more attention to surgery than to medicine, though they generally take a medical degree. The consultant, especially, is very jealous of his title of "Mister." If you wish to see his indignation rise just call him "Doctor." Consulting surgeons are Fellows of the Royal College of Surgeons. Throughout the lectures each man's presence or absence at each lecture is registered, and if he does not attend a good portion his papers are not signed, unless the student can, by a few judiciously placed pennies, bribe the man who keeps this register. Class "Exams" and "Grinds" are held with regularity. As to fees, the perpetual ticket, entitling the holder to all the hospital practice and medical school work throughout, in one of the best hospitals in London, is 132 guineas ($670.56). This even does not entitle him to his degree, but he must pay, for the license of the Society of Apothecaries, $30; for the license of the Royal College of Physicians, $76; for the membership of the Royal College of Surgeons, $107; and on failing to pass, a portion only of the fees are returned· The high fees are somewhat offset by large scholarships.

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Having the men now educated, we will start them into practice. The general practitioner of either medicine or surgery generally starts in pretty readily. He rents a house at $250, $1,200 or $2,000 a year and commences. Rather oftener than otherwise, he is in partnership with one or two others, and the firm, if a good one, will make $10,000 to $30,000, less cost of medicine; one man alone, making the half or the third of this amount. His hours are rather irregular, being liable to be called at any time, but if alone he tries to keep some hours. If in a firm, some one is generally at home. He does, as a rule, his own book-keeping, and sends his bills out by mail quarterly or semi-annually. His fees range from 62½ cents to $2.50, with a preponderance towards the former.

* * The surgeon generally works in sooner than the physician, for people would as willingly, perhaps more so, see a young man with good nerves coming at them, knife in hand, as an old, gray-headed man with glasses, and hands like an aspen leaf. The old surgeon often throws away the knife, and only gives opinions. A consultant always charges a guinea fee—"a guinea or nothing." A few of the leaders, in order to "weed" a large practice, charge two guineas, and it has the desired effect. The consultant's fee is cash. He is called in, his opinion given, and the guinea taken.

Such is the custom, and it is rarely broken. He keeps no books, collects no fees, writes no duns. The consulting physician is bound by his diploma not to go into court for fees. Upon doing so he relinquishes his diploma, also his standing; hence, he never does it. Of this the laity, of course, are not generally aware. * * A general practitioner of either medicine or surgery rarely grows into a consultant. In the occasions in which he does, he is expected to, as it were, wean himself from general practice by a season of total abstinence, as to practice, for two or three years. * * The evening he spends in his study, or as seemeth to him best. In his money-making days, the consultant makes an average annual income of probably $6,000 to $15,000 with the leaders, who can be enumerated digitally, making $25,000 to $60,000 per annum. If called out of town he charges at the rate of $3.39 per mile—no more, no less. A few of the operating fees are these : calotomy, amputation of hand or arm, $125 each; amputation leg, $250; lithotomy, $250. The universal shingle is a brass door plate, which is large proportionately to the want of knowledge on the part of the practitioner. Some men embark in dispensaries. Charitable dispensaries are generally considered honorable. Paying dispensaries are frequently a little crooked. Fees are low. For instance, the window will contain the following list of prices:

Advice with medicine	$ 25
Visits	25
Visits for one week daily	1 00
Midwifery, with attendance, one week	1 25

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In judging of their social status, one has carefully to bear in mind the peculiar forms of English society. Here men are classed after the most arbitrary fashion. One holds his social position not so much with reference to his merit and attainments as by certain accidents and adventitious relationships. Birth, kinship, wealth, title, station, even locality, chance surroundings do, as an American must think, decide most preposterously the social status of an individual. It is extremely difficult to fully understand this, unless one has resided in this country and closely studied its peculiar social conditions. The members of the medical profession form no exception to this idea—that all men are *not* born free and equal. A London medical friend recently stated to me that the physicians and surgeons in a certain portion of London, a large portion, are considered "pariahs, snobs, cads, kicked and cuffed by every one." A sad picture, drawn by no amateur hand in these few words. And yet there are men practicing in that area whose attainments, worth and refinement of character are such as to entitle them to the very highest social position in any country where society is not outlined by such whimsical distinctions as rule here. * * * Their compensation shows them to be held in low estimation by their fellow-men. A gentlemen of good practice in London, living at an expense of $5,000 per annum, will often furnish advice and medicine for 25 to 35 cents. Scores of highly competent medical men in London are struggling and will continue to struggle for years, scarcely able to keep the wolf from the door. It is simply impossible that a man in this condition should occupy a high social position. He could scarcely be considered other than a "pariah from society," which society makes a god of wealth, and bows with obsequious adoration before its idols of gold and silver. Sometimes the long lane turns, if health and pluck endure. One of the most eminent men now in London scarcely earned his salt until he had passed his fortieth year. The case is different now. He is one of those who "weeds" his practice. A proper appreciation of the services of a doctor seems to be absent. The other day a "gentleman"—the word is used in its most flexible sense—drove up to a surgeon's door with liveried driver and lackey, entered the office with a flourish, and presented an injured joint to be examined. This was done, and advice given, when this apparent gentleman threw five shillings ($1.25) on the table. "Pardon me, sir," said the surgeon, "you have made a mistake. My fee is one guinea," ($5.00). "Oh," he replied, "I never give a doctor more than that." "Well," said the surgeon, "then I shall be compelled not to receive anything." "Just as you please," was the reply, and scraping up the five shillings he coolly walked out. The surgeon had no alternative, and he got nothing.—*Edward S. McKee, M. D., in Chicago Medical Journal and Examiner, Oct., 1881.*

EXTIRPATION OF THE LARNYX.

DR. CECCHERELLI (Lyon Médical) gives the following statistics respecting total or partial extirpation of the larnyx: The operations thus far recorded, according to Dr. Ceccherelli, have been thirty, of which twenty-five were total, and five cases of partial resection of the larnyx. The operation was performed eighteen times for carcinoma, and in the other twelve cases the nature of lesion was either not malignant or not recognized. Cure is said to have been obtained in twenty out of the thirty cases, and in one case the result obtained was unknown. Ten cases succumbed later with symptoms of relapse. The final result was therefore ten cases of cure or prolongation of life, and one doubtful case. Ceccherelli concludes: First. That extirpation of the larnyx deserves a place in surgical therapeutics. Second. That it is best carried out by the thermo-cautery. Third. That this should be reserved for cases in which the leison is too diffuse to be attacked by the knife. Fourth. Ordinarily malignant tumors do not yield good results with the operation, but Fifth. It is admissible in carcinoma, though only when it is limited and when the disease is not soft cancer, and has not yet produced general inflammation. While many of these conclusions are interesting and valuable, the last cited is certainly rather vague and unsatisfactory.

FŒTUS CUT UP IN UTERO.

DR. GEORGE E. WHERR (*British Medical Journal*) reports the following rather remarkable case: A young woman, aged nineteen, consulted a Cambridge chemist named Ransome, and his wife, a professed midwife; and took medicines with intent to produce abortion, but without the desired effect. On December 5, 1880, she was induced by the Ransomes to submit to an operation by a man named Lepper, who came from London. After payment of fifty dollars, he passed up a "silver hook," which "hurt her very much," and blood came away. No witnesses were present. Another similar operation was performed a few hours later, causing great pain, and some loss of blood. On both occasions she walked a distance of more than a mile to the chemist's shop where the operation was performed. On the evening of December 7, parts of the fœtus passed from her, consisting of the extremities and trunk; the head came away an hour or so afterwards. There was no decomposition; the skin was rosy and firm. The legs were separated from the trunk and upper extremities, and the head severed from the body. The fœtus was about three months old; the head was large; there were indications of the eyelids; the membrana pupillaris was visible; the mouth was open, showing the tongue. The toes and fingers were nearly separate. The nails were commencing. The fœtus having been cut up into pieces in utero at such a period of pregnancy is extraordinary. The instrument used perforated the uterine wall, and so caused peritonitis. The girl was unable to appear when the prisoners were brought up for trial, and, in consequence of some legal flaw, the depositions of the patient herself were not admissible as evidence, and the case against the prisoners rested on the medical opinion that nothing but instrumental interference could have cut up the fœtus in the way described. Lepper and the Ransomes were convicted, and each sentenced to five years penal servitude.